

What is claimed is:

1. A method for adjusting data modulation at a subscriber unit, comprising:
receiving data at a transmitter for transmission;
formatting the received data into packets for transmission, each packet having a particular type of encoding/data modulation;
transmitting the packets;
monitoring a return channel for receipt of an acknowledgment for each packet that that packet has been received;
retransmitting a packet at the transmitter, if an acknowledgment for that packet has not been received;
collecting retransmission statistics; and
adjusting each particular encoding/data modulation using the collected retransmission statistics.
2. The method of claim 1 wherein the particular type of encoding/data modulation is forward error correction (FEC).
3. The method of claim 2 wherein the packets are transmitted using an orthogonal frequency division multiple access (OFDMA) air interface and the FEC encoding/data modulation adjusting is performed in addition to selective nulling of subchannels in an OFDMA set.

4. The method of claim 1 wherein the packets are transmitted using a single carrier having a frequency domain equalization (SC-FDE) air interface.
5. The method of claim 1 wherein the return channel is the fast feedback channel when the packets are transmitted using a code division multiple access (CDMA) air interface.
6. The method of claim 1 further comprising:
identifying a packet as having an unacceptable error rate responsive to receipt of a negative acknowledgment.
7. A method for adjusting data modulation at a subscriber, comprising:
formatting data into packets for transmission over a wireless air interface;
receiving packets of data over said air interface, each packet having a particular encoding/data modulation;
for each received packet, generating and transmitting a positive acknowledgment at the physical layer of said air interface when a received packet has an acceptable error rate.
8. The method of claim 7 wherein the positive acknowledgments are transmitted on the fast feedback channel when said air interface using a code division multiple access (CDMA).

9. The method of claim 7 further comprising transmitting a negative acknowledgment if that packet has an unacceptable error rate.